

AMENDMENTS TO THE CLAIMS:

Claims 43-61 are canceled without prejudice or disclaimer. Claims 62-81 are added. The following is the status of the claims of the above-captioned application, as amended.

Claim 62 (New). An isolated enzyme exhibiting beta-1,4-endoglucanase activity (EC 3.2.1.4), which (a) has a temperature optimum of 65°C measured at a pH of 7.5 and (b)(i) has an amino acid sequence that is at least 85% identical to amino acids 1-456 or 1-617 of SEQ ID NO: 2 wherein identity is determined by GAP provided in the GCG program package using a GAP creation penalty of 3.0 and GAP extension penalty of 0.1 or (ii) is encoded by a DNA sequence that hybridizes to one or more of nucleotides 76-1455 of SEQ ID NO: 1 under high stringency conditions, wherein the high stringency conditions are defined as hybridization in 5xSSC at 45°C and washing in 2xSSC at 70°C.

Claim 63 (New). The enzyme of claim 62, which belongs to family 9 of glycosyl hydrolases.

Claim 64 (New). The enzyme of claim 63, which has an amino acid sequence that is at least 85% identical to amino acids 1-456 or 1-617 of SEQ ID NO: 2.

Claim 65 (New). The enzyme of claim 64, which has an amino acid sequence that is at least 90% identical to amino acids 1-456 or 1-617 of SEQ ID NO: 2.

Claim 66 (New). The enzyme of claim 65, which has an amino acid sequence that is at least 95% identical to amino acids 1-456 or 1-617 of SEQ ID NO: 2.

Claim 67 (New). The enzyme of claim 66, which has an amino acid sequence that is at least 98% identical to amino acids 1-456 or 1-617 of SEQ ID NO: 2.

Claim 68 (New). The enzyme of claim 62, which comprises an amino acid sequence of amino acids 1-456 of SEQ ID NO: 2.

Claim 69 (New). The enzyme of claim 62, which comprises an amino acid sequence of amino acids 1-617 of SEQ ID NO: 2.

Claim 70 (New). The enzyme of claim 62, which consists of an amino acid sequence of amino acids 1-456 of SEQ ID NO: 2.

Claim 71 (New). The enzyme of claim 62, which consists of an amino acid sequence of amino acids 1-617 of SEQ ID NO: 2.

Claim 72 (New). The enzyme of claim 62, -+which is encoded by a DNA sequence that hybridizes to one or more of nucleotides 76-1455 of SEQ ID NO: 1 under high stringency conditions, wherein the high stringency conditions are defined as hybridization in 5xSSC at 45°C and washing in 2xSSC at 70°C.

Claim 73 (New). The enzyme of claim 72, which is encoded by a DNA sequence that hybridizes to one or more of nucleotides 76-1455 of SEQ ID NO: 1 under high stringency conditions, wherein the high stringency conditions are defined as hybridization in 5xSSC at 45°C and washing in 2xSSC at 75°C.

Claim 74 (New). The enzyme of claim 62, which is a *Bacillus licheniformis* enzyme.

Claim 75 (New). The enzyme of claim 54, which is a *Bacillus licheniformis*, ATCC 14580 enzyme.

Claim 76 (New). The enzyme of claim 43, which is active at a pH in the range of 4-11.

Claim 77 (New). The enzyme of claim 56, which is active at a pH in the range of 5.5-10.5.

Claim 78 (New). An enzyme composition comprising the enzyme of claim 43.

Claim 79 (New). The composition of claim 58, which further comprises one or more enzymes selected from the group consisting of alpha-amylases, cellobiohydrolases, cellulases (endoglucanases), cutinases, beta-glucanases, glucoamylases, hemicellulases, laccases, ligninases, lipases, oxidases, pectate lyases, pectin acetyl esterases, pectinases, pectin lyases, pectin methylesterases, peroxidases, phenoloxidases, polygalacturonases, proteases,

pullulanases, reductases, rhamnogalacturonases, xylanases, xyloglucanases, other mannanases, transglutaminases; and mixtures thereof.

Claim 80 (New). A method for degradation of cellulose-containing biomass, comprising treating the biomass with an effective amount of the enzyme of claim 43.

Claim 81 (New). An enzyme exhibiting beta-1,4-endoglucanase activity (EC 3.2.1.4) which has an amino acid sequence comprising amino acids 1-456 or 1-617 of SEQ ID NO: 2.